SWK-DN603903-12-C1

Rev. 1.0

E Band Power Distribution Network, 12 Way

Description:

Model SWK-DN603903-12-C1 is a custom build E band, 12-way in-line amplitude and phase adjustable power distribution network that operates across the frequency range of 60 to 90 GHz. The power distribution network includes a Gunn oscillator as signal generator, a 12 way power divider, 12 adjustable phase shifters, 12 level setting attenuators, 12 Faraday isolators and some special waveguide assemblies to form the final RF interface. The adjustable phase shifters and level setting attenuators are used to offer good amplitude and phase balanced power distribution across the entire E band frequency range. By removing the Gunn oscillator, the apparatus can be used or tailored as a test fixture for advanced power combiner demonstration or development.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	60 GHz		90 GHz
Gunn Oscillator Center Frequency	77.5 GHz	78 GHz	78.5 GHz
Gunn Oscillator Bias Tuning Range	±100 MHz (+4.5 to +5.5 Vdc)		
Gunn Oscillator Bias Voltage		+5.0 V_{DC}	+6.0 V_{DC}
Gunn Oscillator Bias Current		350 mA	
Insertion Loss (Including the Power Dividing)		18 dB	
Phase Adjustment Range		0 to 180 °	
Amplitude Adjustment Range		0 to 30 dB	
Port Return Loss		15 dB	
Power Handling			250 mW (CW)
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input Port	WR-12 Waveguide with UG-387/U Flange when Oscillator is Removed
Output Ports	12X Custom Waveguide W/ Custom 12-Way Flange
Weight	35 Lbs
Size	20” (L) x 21.72” (W) x 2.69” (H)
Height Adjustable Range	4” (Typical)
Outline	WK-DN-E-C1

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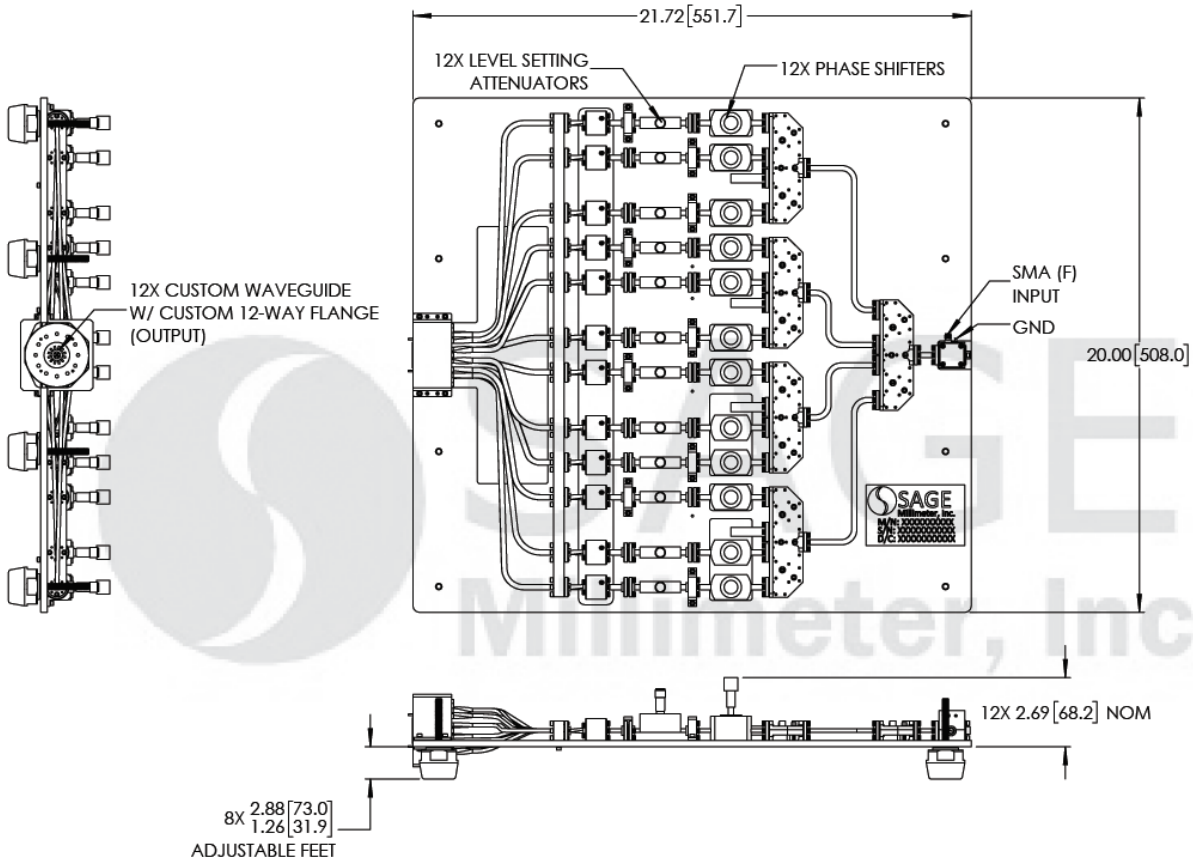
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Any foreign objects in the waveguide will degrade performance and/or damage the device.

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